

In the Specification

The following is a marked-up version of the specification with the language that is underlined ("___") being added and the language that contains strikethrough ("~~---~~") being deleted:

Page 3, line 20 through page 4, line 15.

SUMMARY OF THE INVENTION

~~---~~ The present disclosure relates to a data storage device, comprising a plurality of electron emitters adapted to emit electron beams, the electron emitters each having a planar emission surface, and a storage medium in proximity to the electron emitter, the storage medium having a plurality of storage areas that are capable of at least two distinct states that represent data, the state of the storage areas being changeable in response to bombardment by an electron beams emitted by the electron emitters, wherein data is written to the device by changing the state of the storage areas and data is read by the device by observing phenomena relevant to the storage areas.

~~---~~ In addition, the disclosure relates to a method for storing data, comprising the steps of emitting an electron beam from an electron emitter including a planar emission surface, directing the electron beam toward a storage medium comprising a plurality of storage areas, and bombarding one of the storage areas with electrons with the electron beam so as to change the state of a storage area. Typically, although not necessarily, the method further comprises the step of bombarding one of the storage areas with electrons with a lower current electron beam and observing its effect on the storage area.

~~---~~ The features and advantages of the invention will become apparent upon reading the following specification, when taken in conjunction with the accompanying drawings.

Disclosed are electron emitters and data storage devices that include electron emitters. In one embodiment, an electron emitter includes a substrate and a semiconductor layer provided on the substrate, the semiconductor layer comprising a planar outer surface that includes a planar emission surface, wherein the electron emitter is configured to emit electrons from the planar emission surface within the data storage device.

In another embodiment, an electron emitter includes a substrate and an insulator layer provided on the substrate, the insulator layer comprising a planar outer surface that includes a planar emission surface, wherein the electron emitter is configured to emit electrons from the planar emission surface within the data storage device.